Business Thinking

Business thinking starts with an intuitive choice of assumptions. Its progress as analysis is intertwined with intuition. The final choice is always intuitive. If that were not true, all problems of almost any kind would be solved by mathematicians with nonquantitative data.

The final choice in all business decision is, of course, intuitive. It must be. Otherwise it is not a decision, just a conclusion, a printout.

The tradeoff of subjective nonquantifiable values is by definition a subjective and intuitive choice. Intuition can be awesome in its value at times. It is known as good judgment in everyday affairs. Intuition is in fact the subconscious integration of all the experiences, conditioning and knowledge of a lifetime, including the emotional and cultural biases of that lifetime.

But intuition alone is never enough. Alone it can be disastrously wrong. Analysis too can be disastrously wrong. Analysis depends upon keeping the required data to manageable proportions. It also means keeping the nonquantifiable data to a minimum. Thus analysis by its very nature requires initial oversimplification and intuitive choice of starting assumptions with exclusion of certain data. All of these choices are intuitive. A mistake in any one can be fatal to the analysis.

Any complex problem has a near infinite combination of facts and relationships. Business in particular is affected by everything, including the past, the nonlogical and the unknowable. This complexity is compounded by multiple objectives to serve multiple constituencies, many of whose objectives must be traded off. Problem-solving with such complexity requires an orderly, systematic approach in order to even hope to optimize the final decision.

When the results of analysis and intuition coincide, there is little gained except confidence. When the analysis reaches conclusions that are counterintuitive, then more rigorous analysis and reexamination of underlying assumptions are always called for. The expansion of the frame of reference and the increased rigor of analysis may be fruitful.

But in nearly all problem-solving there is a universe of alternative choices, most of which must be discarded without more than cursory attention. To do otherwise is to incur costs beyond the value of any solution and defer decision to beyond the time horizon. A frame of reference is needed to screen the intuitive selection of assumptions, relevance of data, methodology and implicit value judgments. That frame of reference is the concept.

Conceptual thinking is the skeleton or the framework on which all the other choices are sorted out. A concept is by its nature an oversimplification. Yet its fundamental relationships are so powerful and important that they will tend to override all except the most extreme exceptions. Such exceptions are usually obvious in their importance. A concept defines a system of interactions in terms of the relative values that produce stable equilibrium of the system. Consequently, a concept defines the initial assumptions, the data required and the relationships between the data inputs. In this way it permits analysis of the consequences of change in input data.

Concepts are simple in statement but complex in practice. Outputs are almost always part of the input by means of feedback. The feedback itself is consequently a subsystem interconnected with other subsystems.

Theoretically, such conceptual business systems can be solved by a series of simultaneous equations. In practice, computer simulation is the only
practical way to deal with the characteristic multiple inputs, feedback loops and higher order effects in a reasonable time at reasonable cost with all the underlying assumptions made explicit. Pure mathematics becomes far too ponderous.

Concepts are developed in hard science and business alike from an approximation of the scientific method. They start with a generalization of an observed pattern of experience. They are stated first as a hypothesis, then postulated as a theory, then defined as a decision rule. They are validated by their ability to predict. Such decision rules are often crystallized as policies. Rarely does a business concept permit definitive proof enough to be called a “law” except facetiously.

Intuition disguised as status, seniority and rank is the underlying normative mode of all business decisions. It could not be otherwise. Too many choices must be made too often. Data is expensive to collect, often of uncertain quality or relevance. Analysis is laborious and often far too expensive even though imprecise or superficial.

Yet two kinds of decisions justify rigorous and painstaking analysis guided by intuition derived from accumulated experience. The irrevocable commitment of major reserves of resources deserves such treatment. So do the major policies which guide and control the implementation of such commitments.

All rigorous analysis is inherently an iterative process. It starts with an intuitive choice and ends with an intuitive decision. The first definition of a problem is inescapably intuitive. It must be in order to be recognized as a problem at all. The final decision is intuitive. It must be or there is no choice and therefore no need for decision.

Between those two points of beginning and ending, the rigorous process must take place. The sequence is analysis, problem redefinition, reanalysis and then even more rigorous problem redefinition, etc. until the law of diminishing returns dictates a halt – intuitively.

The methodology and sequence of business thinking can be stated or at least approximated.

- State the problem as clearly and fully as possible.
- Search for and identify the basic concepts that relate to the perceived critical elements.
- Define the data inputs this conceptual reference will require. Check off and identify any major factors which are not implicitly included in the conceptual base.
- Redefine the problem and broaden the concept as necessary to include any such required inputs.
- Gather the data and analyze the problem.
- Find out to which data inputs the analysis is sensitive. Reexamine the range of options with respect to those factors and the resulting range of outputs.
- Based on the insights developed by the analysis, redefine the problem and repeat the process.
- Reiterate until there is a consensus that the possible incremental improvement in insight is no longer worth the incremental cost. That consensus will be intuitive. It must be. There is no way to know the value of the unknown.

It is a matter of observation that much of the value of a rigorous and objective examination of a problem will be found in one of three areas:

- First, the previously accepted underlying assumptions may prove to be invalid, in fact, or inadequate as the problem definition is changed.
- Second, the interaction between component functions may have been neglected, resulting in suboptimization by function.
- Third, a previously unknown or unaccepted or misunderstood conceptual framework may be postulated which both permits prediction of
the consequence of change and partially explains these consequences.

It is also a matter of common observation that the wisest of intuitive judgments come after full exploration and consensus on the nature of the problem by peers of near equal but diverse experience.

Finally, it is also a matter of general experience that implementation of the optimum decision will prove difficult if that discussion and consensus have not been continued long enough to make the relationship between the overall objective and the specific action seem clear to all who must interpret and implement the required policies. Otherwise, the intuition of those who do the implementation will be used to redefine the policies which emerged from analysis. This is one reason planned organization change is so difficult, and random drift is so common.

Here are some fundamental procedural suggestions. Define the problem and hypothesize the approach to a solution intuitively before wasting time on data collection and analysis. Do the first analysis lightly. Then and only then redefine the problem more rigorously and reanalyze in depth. (Don’t go to the library and read all the books before you know what you want to learn.) Use mixed project research teams composed of some people with finely honed intuitions from experience and others with highly developed analytical skills and too little experience to know what cannot be done. Perhaps in this way you can achieve the best of both analysis and intuition in combination and offset the weaknesses of either.

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